

branches of current year's growth. The best time for collecting leaf samples is from mid-July to mid-August.

You can send soil and plant tissue samples to NCDA's Agronomic Division laboratory. There is a \$4 fee per sample for plant tissue analysis and no charge for soil samples. Sampling supplies are available from the local Cooperative Extension office or the Agronomic Division laboratory in Raleigh.

North Carolina Department of Agriculture

**Agronomic Division
4300 Reedy Creek Road
Raleigh, NC 27607-6465**



Revised 4/97

NOTE 15: Pecans and Misc. Nuts & Fruit



Commercial Orchard Establishment

All fruit and nut trees require fertile soil with balanced amounts of plant nutrients. The lime and fertilizer recommended for orchard establishment serve this purpose. Excessive fertilization and placement of fertilizer near roots at the time of setting is a common cause of the death of young trees.

Broadcast the lime, P_2O_5 and K_2O . Plow the fertilizer into the soil as deep as possible. Dig holes of large enough size for the roots, and set the trees.

Fertilize the young trees again in March or April with no more than 0.5 pound of a 14-0-14 grade of fertilizer or its equivalent. Spread it evenly over the soil in a circle 12 inches from the trunk outward to a distance of 3.5 ft from the trunk or slightly beyond the limb span.

Commercial Orchard Maintenance

There are two rather distinct management systems for pecan and other orchard crops:

- management for nuts or fruit only
and
- management for the production of an intercrop plus nuts or fruit.

The key to the success of either is the maintenance of a high level of fertility that will promote good nut and fruit yields.

**Additional information
can be obtained
from an
NCDA regional agronomist
or the local
Cooperative Extension office.**

Nonbearing Trees for Nuts or Fruit Only

a. If you applied the rates of lime and fertilizer recommended by a soil test prior to setting, follow this fertilization schedule.

- In the second year, apply 0.14 lb of both N and K₂O (equivalent to 1 lb 14-0-14 per tree). Spread it in a circle starting 1 ft from the trunk and extending outward to 3.5 ft or slightly beyond the limb span.

- In subsequent years up to bearing age, apply 0.07 lb of both N and K₂O for each year of tree age. Spread it in a circle starting 12 to 18 inches from the trunk and extending outward slightly beyond the limb span.

b. If you set trees without corrective lime and fertilizer treatments, follow this fertilization schedule.

- Broadcast the lime and fertilizer recommended by a current soil test report over the entire area.

or

- To treat individual trees, apply 0.07 lb of N and K₂O for each year of tree age. Spread it in a circle starting 12 to 18 inches from the trunk and extending outward slightly beyond the limb span.

- Continue the same individual treatment each year until bearing age.



Bearing Trees for Nuts or Fruit Only

a. Get a new soil test the first year that trees begin to bear. Broadcast the recommended lime and fertilizer over the entire area.

b. To each tree, annually apply 0.25 lb of N and K₂O (equivalent to 2 lb of 14-0-14) for each inch of trunk diameter at a height of one foot, as follows.

- In February, broadcast half of the fertilizer under and slightly beyond the limb span.

- After fruit set, apply the other half in the same manner.

- If fruit set is light or does not occur, omit the last half of the treatment.

- Test the soil every 3 to 4 years.

Nonbearing Trees with Intercropping

Intercropping involves growing cash crops between rows of trees. A reasonable spacing between the tree crop and the intercrop lessens the possibility of damage to trees. This management system provides an economic return from the land until the young trees are brought into production.

If you are planning to intercrop, test the soil to determine the lime and fertilizer needs for the companion crop. Usually the rate recommended for the companion crop is adequate for the tree crop as well if it is broadcast over the entire area.

If you apply lime and fertilizer only to the companion crop area, test the soil in the tree-row

area separately. You can then follow establishment and maintenance treatments as if the trees were grown alone.

Fruit & Nut Trees around the Home

You can lime and fertilize apricots, cherries, chestnuts, figs, pears, pecans, plums, walnuts and other home orchard crops in much the same manner as commercial pecan orchards. Soil test reports give lime and fertilizer recommendations for yard trees in units of lb/1000 ft². The initial recommendation contains enough nitrogen for the first year. In subsequent years, follow one of the maintenance schedules for commercial orchards.

Lush vegetative growth and little or no yield usually indicate excessive application of nitrogen. Reduce nitrogen fertilization if new terminal growth of tree limbs exceeds 12 to 18 inches per year.

Micronutrients

The soil test report expresses levels of the micronutrients manganese (Mn), zinc (Zn) and copper (Cu) as indexes. Levels are adequate if index values are >25.

Uptake of micronutrients by plants decreases as soil pH increases. Deficiencies generally occur when the soil pH >6.2.

Micronutrient availability can be difficult to assess from a soil test alone, especially for zinc. If you suspect a micronutrient problem, collect matching soil and leaf samples. Take such samples only when abnormal growth or symptoms appear.

Take soil samples from around the perimeter of the tree to a depth of 6 inches, staying within the drip line. Collect recently matured leaves from